REMARKS

By the present amendment, independent claims 1 and 5 have been amended to obviate the examiner's objections thereto and/or to further clarify the concepts of the present invention. In addition, claims 13 through 14 have been canceled and dependent claims 15 through 18 have been added.

More particularly, claims 1 and 5 have been amended to recite that (a) the hot melt adhesive is a urethane reactive hot melt adhesive which melts in a temperature range of 100 to 130°C, (b) the substrate is a wood board and (c) the rotating direction of the applicator roller clarified. These amendments are supported by the disclosure at page 1, line 9 and page 15, lines 4 to 6 and 19 of the present specification.

As to newly added dependent claims 15 to 18, the subject matter of claims 15 and 17 is supported by the disclosure at page 17, line 10 and page 21, lines 21 to 23 of the present specification. The subject matter of claims 16 and 18 is supported by the disclosure at page 15, line 6 of the present specification. Entry of these amendments is respectfully requested.

In the Office Action, claims 1 and 4-6 were rejected under 35 USC § 102(b) as being anticipated by the patent to Nichol. In making this rejection, it was asserted that the cited

patent teaches application of glue to a substrate with a roller which is rotating at a speed differential of at least 25% relative to the speed of the substrate. It then apparently was concluded that such a disclosure meets the limitations of the noted claims. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

Before discussing the rejection in detail, a brief review of the presently claimed invention may be quite instructive. Claim 1 of the present application is directed to a method for applying a hot melt adhesive in a melted state to a surface of a substrate. Claim 5 of the present application is directed to a device for coating a substrate by applying a hot melt adhesive in a melted state to a surface of a substrate. Claims 1 and 5 have been amended herein to recite that the hot melt adhesive is a urethane reactive hot melt adhesive and melts in a temperature range of 100 to 130°C and the substrate is a wood board. It is submitted that the method and device as claimed are not taught or suggested by the cited patent to Nichol.

As mentioned above, claims 1 and 5 of the present application have been amended to recite that the substrate is a wood board. A wood board is inflexible. Thus, unlike the present invention, the substrates disclosed in the Nichol patent are wax covered paper and paperboard, which are flexible to some extent.

As also mentioned above, claims 1 and 5 of the present application have been amended to recite that the hot melt adhesive is a urethane reactive hot melt adhesive which melts in a temperature range of 100 to 130°C. Since such a low temperature for melting is possible, there is an advantage in which heat damage is not caused in a wood substrate during coating.

In distinct contrast, the Nichol patent discloses on paragraph 2, lines 33 to 53, that, since the melting temperature of the wax used is about 130 to 160°F, the glue to be used according to the patent must be heated to a temperature substantially above the melting temperature of the wax. Regarding a heating temperature of the glue, 325 to 450° F is disclosed in the paragraph 23, lines 47 to 48 in the Nichol patent. This Fahrenheit temperature range of 325° to 450° F of the Nichol patent can be converted to centigrade temperature range of 162 to 232°C, which is significantly higher than the temperature of 100 to 130°C recited in Claim 1 of the claims of the present application.

As shown in Fig. 2 of the Nichol patent, a coating roller (glue applying wheel) is rotated in the reverse direction as compared with the rotational direction of a roller of the present invention. Unlike the presently claimed invention, the Nichol patent discloses in the paragraph 5, line 35 to 39, that "a carton blank proceeds to the direction shown by the arrow A where the wheel 8 rotates in & direction shown by the arrow B, which is opposite to the direction of movement of the carton box." It is submitted that such a rotational

direction according to the Nichol patent causes increased consumption of glue.

As described above, the disclosure of the Nichol patent differs from the presently claimed invention. Accordingly, withdrawal of the rejection under 35 U.S.C. § 102(b) and allowance of claims 1 and 4-6 as amended over the cited Nichol patent are respectfully requested.

Claims 1, 3-6, 10 and 13/10 were rejected under 35 USC § 102(b) as being anticipated by the patent to Ballard. In making this rejection, it was asserted that the cited patent teaches application of a hot melt adhesive to a tufted product using an application roller which is rotated at a speed which is 50% less than the speed of the product. Again, it apparently was concluded that such a disclosure meets the recitations of the noted claims. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

The patent to Ballard discloses an ethylene/vinyl acetate copolymer based hot-melt adhesive and a flexible carpet. As such, the objects of Ballard are different from the objects of the present invention wherein excellent surface smoothness of an inflexible substrate is sought. Furthermore, in the Examples of the Ballard patent, adhesive temperatures (Fahrenheit temperature) such as 330, 340 and 325°F or the like are disclosed. Such melting point temperatures are significantly higher than those of the

presently claimed invention.

It is thus submitted that independent claims 1 and 5 as amended distinguish over the cited Ballard patent. Accordingly, withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 1, 3-6, 10 and 13/10 over the cited Ballard patent are respectfully requested.

Claims 13 and 14 were rejected under 35 USC § 102(b) as being anticipated by the '028 Japanese patent publication. In making this rejection, it was asserted that the cited patent publication teaches a laminate of a paper adhered to a wood board by an adhesive. It was further asserted that the method of application of the adhesive was not considered to produce a product which differs from the product according to the publication. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

As mentioned above, claims 13 and 14 have been canceled herein. Thus, it is submitted that the subject rejection is now moot. Accordingly, withdrawal of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

Claims 1-14 were rejected under 35 USC § 103(a) as being unpatentable over the admitted prior art (APA) in view of the patent to Nichol. In making this rejection, the

examiner has asserted that the APA as evidenced by the cited portion of the subject application teaches the use of a hot melt adhesive to laminate a decorative paper to a wood substrate. It was acknowledged that the APA does not teach the use of an application roller operating at a speed differing from that of the substrate to apply such a hot melt adhesive. The patent to Nichol, for the reasons identified above, it alleged to supply this teaching deficiency. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

As noted previously, the claims of the subject application have been amended to clarify the characteristics of the present invention. The differences between claims of the present invention and the Nichol patent are significant as set forth in detail above. It is submitted that a person with ordinary skill in the art would not achieve the present invention, even if the patent to Nichol and the admitted prior art, which is described in the present specification from page 1, line 15 to page 4, line 10, were combined.

In addition, when an adhesive is coated on a substrate which is a wood board, granular strip, fine dust or the like originating from a material of the wood substrate tends to adhere to an applicator roller. As a result, the adhered strip or the like causes problems regarding an obtained adhesive layer such as unsuitable surface fine unevenness, coating unevenness, pinholes and the like, and therefore the surface smoothness, aesthetic appeal and the like tend to deteriorate.

Furthermore, when the adhesive to be coated is a hot melt adhesive, roughness of the surface is caused easily, since the viscosity of the adhesive is higher as compared with other adhesives. This roughness causes problems such as deterioration of aesthetic appeal and surface smoothness as is set forth in the description contained in the BACKGROUND ART of the present specification. Furthermore, when other types of substrates such as carpet, paper or the like are used, problems caused by said substrate are different from those caused by a wood board. A chip or the like originated from a wood board is not generated from carpet, paper or the like.

Accordingly, it is submitted that a person with ordinary skill in the art cannot achieve the present invention from the cited art. It would not be apparent for a person skilled in the art to select a specific application method from the description of the cited art wherein no disclosure regarding a combination of a wood board and a hot melt adhesive exists. Further, it would not be apparent for a person skilled in the art to use the subject application method in order to solve problems which are caused when a hot melt adhesive and an a wood board are used in combination.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 1 through 12 as amended over the cited art are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP

Donald W. Hanson
Attorney for Applicants
Reg. No. 27,133

Atty. Docket No. 040497
Suite 1000, 1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930
DWH/rab

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PATENT TRADEMARK OFFICE